

## REMARKS

In response to the Office Action dated March 15, 2007, claims 35-42 and 45 have been amended, new claims 47 and 48 have been added. No new matter has been added. Reexamination and reconsideration of the claims as requested is respectfully requested.

In paragraph 2 on page 5 of the Office Action, claims 35-46 are rejected under 35 U.S.C. § 112 first paragraph as failing to comply with the enablement requirement; in paragraph 3 on page 6, claims 35-46 are rejected as based on a disclosure which is not enabling; and in paragraph 4 on page 6, claims 39-40 and 45-46 are rejected as failing to comply with the written description requirement.

In item 2 on page 5 of the above-identified Office action, claims 35-46 have been rejected by the Examiner under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

In item 3 on page 6 of the Office action, claims 35-46 have been rejected by the Examiner under 35 U.S.C. § 112, first paragraph, as being based on a disclosure which is not enabling.

In item 4 on page 6 of the Office action, claims 39-40 and 45-46 have been rejected by the Examiner under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Applicant traverses each of the foregoing rejections.

In the *Response to Arguments* on page 2 of the Office action, the Examiner has stated that:

Applicant states on page 6 of the remarks, "It could be that the pump is adjusted such or is just able to produce a reduced (negative) pressure

that is just above the critical pressure, thereby not requiring a controller." Applicant fails to provide where such support of the pump alone having such ability. In fact, applicants paragraph 0029 contradicts such by disclosing "means of a pump controller which controls a pump producing the reduced pressure in the capillary device"

MPEP § 2172.01 (8E5R), states

**2172.01 Unclaimed Essential Matter**

A claim which omits matter disclosed to be essential to the invention ***as described in the specification or in other statements of record*** may be rejected under 35 U.S.C. 112, first paragraph, as not enabling. *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). See also MPEP § 2164.08(c). Such essential matter may include missing elements, steps or necessary structural cooperative relationships of elements described by the applicant(s) as necessary to practice the invention.

In addition, a claim which fails to interrelate essential elements of the invention ***as defined by applicant(s) in the specification*** may be rejected under 35 U.S.C. 112, second paragraph, for failure to point out and distinctly claim the invention. [Citations omitted]

(Emphasis added.)

The specification of the instant application nowhere states or describes that a pump controller is an essential element of the present invention. As indicated previously, such a controller is merely one way for practicing the present invention. In fact, paragraph 0093 of the instant application states "control measure [of the pressure] is usually ***noncritical***"(emphasis added). Consequently, the Examiner is requested to reconsider the rejection.

In the *Response to Arguments* on pages 2-3 of the Office action, the Examiner has stated that:

While the claim further relates the pumps ability to a critical pressure, there is no numerical value given as for one to ascertain or determine

what is the value of such critical pressure, thereby determining the specific limitations of the pump. The cited critical pressure would be dependent upon a number of factors (as supported by a the equation cited in the claims), .... Considering such, as previously stated any pump capable of generating a negative pressure in a pipette would be considered equivalent to the element as claimed. In view of such claim 37 directed to such **critical pressure** is **not** further structurally **limiting** of the structure.

(Emphasis added.)

The claims recite:

a pump, said pump **producing a negative pressure** in said pipette wherein said produced negative pressure **does not go below a critical pressure** at which the surface tension of a liquid present at said at least one pore of said diaphragm would be overcome;

(Emphasis added.)

According to MPEP 2173.05, "a functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used."

It is therefore believed that the functional limitation "a negative pressure ... not go below a critical pressure" is a limitation which further limits the structural feature "pump" and therefore must be given patentable weight.

In the *Response to Arguments* on pages 3-4 of the Office action, the Examiner has stated that:

Paragraph 0098 ...supports the device interacting with gas while preventing a liquid from entering. On the other hand, the claims imply the device is capable of taking up any other substance (see rejection for examples) other than the previously mentioned liquid. The device is not disclosed as having such ability. The device is disclosed in a method of pump only a gas or liquid. As previously stated the **negative limitation is not adequately supported**.

(Emphasis added.)

The Examiner comments have been noted and in order to expedite prosecution, claims 39 and 45 have been amended by deleting the negative limitation.

In the *Response to Arguments* on page 4 of the Office action, the Examiner has stated that:

As previously stated the "medium" is not positively claimed as an element of the device and is only mentioned in terms of expressing intended use of the device. In view of such claims 38 and 39 are **not** further limiting of the structure.

(Emphasis added.)

The Examiner's comments have been noted and claims 38-39 and 44-45 haven been appropriately amended to positively introduce a medium to be analyzed.

In item 2 on page 6 of the Office action, the Examiner has stated that:

If the device is placed in a first liquid (as illustrated in Figure 4) by the device does not allow the first liquid to enter, then is it applicant's position that a gas (or second liquid) enters instead of the first liquid? If so then where is such gas (or second liquid) located? Figure 4 only illustrates a single liquid. How is it possible for a second substance to enter the pipette when it is submerged in the liquid?

(Emphasis added.)

This is, for example, explained in paragraph 0086 of the instant application, which states:

If the well 402 is emptied, i.e. the analyte 403 is taken up fully into the pipette 401, then a meniscus 503 is formed, as represented in FIG. 5, at each pore opening 501 between the analyte 403 and the air 502 which is all that remains in the well 402.

In item 3 on page 6 of the Office action, the Examiner has stated that:

A controller is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure.

A discussed in a previous part of this reply, a controller is not an essential feature of the present invention, and therefore recitation thereof is believed not to be necessary.

In item 4 on page 6 of the Office action, the Examiner has stated that:

Claims 39 and 45 are directed to a new negative limitation not previously required. Where is such a claim supported? If the medium is not liquid, then that implies the medium can be any other material such as gas, plasma, solid material such as fine powders, suspensions, etc.

A discussed in a previous part of this reply, claims 39 and 45 have been amended and no longer contain a negative limitation.

In paragraph 6 on page 7 of the Office Action, claims 35-46 are rejected under 35 U.S.C. § 112 second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which is regarded as the invention. The Applicants respectfully traverse this rejection.

In item 6 on page 7 of the Office action, the Examiner has stated that:

It is unclear how the apparatus is a capillary device when no capillary element is claimed.

The word "capillary" has been deleted from the claims.

In the second paragraph on page 8 of the Office action, the Examiner has stated that:

The equation of claims 37 and 43 are not further limiting of the structure, but merely states how one intends to calculate the critical pressure.

Claims 37 and 43 recite the functional relationship between the critical pressure and the radius of said at least one pore. Claims 37 and 43 are therefore believed to contain proper limitations further limiting the scope of protection.

It is accordingly believed that the claims meet the requirements of 35 U.S.C. § 112, first/second paragraph. The above-noted amendments to the claim(s) are provided solely for the purpose of satisfying formal requirements, clarification, or are made solely for cosmetic reasons to clarify the claim(s) and do not comprise new matter. The changes are neither provided for overcoming the prior art nor do they narrow the scope of the claim(s) for any reason related to the statutory requirements for a patent.

In paragraph 9 on page 9 of the Office Action, claims 35-46 are rejected under 35 U.S.C. §102 (b) as being anticipated by Bjorkman (US 4,642,220); in paragraph 10 on page 10, claims 35-46 are rejected as being anticipated by Moulton (US 5,851,491); and in paragraph 11 on page 11, claims 35-46 are rejected as being anticipated by Kitajima, et al. (US 6,225,130). Applicant respectfully traverses these rejections.

The rejections and the Examiner's comments have been considered. However, as will be explained below, it is believed that the claims were patentable over the applied references in their original form and the claims have, therefore, not been amended to overcome the applied references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 35 (similarly claims 41, 47, and 48) recite, *inter alia*:

a pipette for taking up a medium to be analyzed, said pipette having a diaphragm containing at least one pore of a given radius;

a pump, said pump producing a negative pressure in said pipette wherein said negative pressure does **not** go below a critical pressure **at which the surface tension of a liquid** present at said at least one pore of said diaphragm **would be overcome**.

(Emphasis added.)

Newly added independent claims 47 and 48 furthermore recite a control measure for controlling the negative pressure.

In the third paragraph on page 5 of the Office action, the Examiner stated:

It should be noted as stated above in terms of the device, the invention is only defined by a pipette including a diaphragm with a pore, and a pump capable of creating a negative pressure. As previously stated the liquid (and or medium) is not an element of the device.

Apparently the recited functional feature of a negative (reduced) pressure not going below a critical pressure has **not** been given patentable weight by the Examiner.

Neither *Bjorkman*, *Moulton*, or *Kitajima et al.* of the applied reference disclose (or suggest) a diaphragm with a pore, a liquid at the pore, and a negative pressure not going below a critical pressure at which the surface tension of the liquid present at the pore would be overcome. Therefore, the invention as recited in claims 35 and 41 of the instant application is believed to be novel over *Bjorkman*, *Moulton*, or *Kitajima et al.* Claims 35, 41, 47, and 48 are, therefore, believed to be patentable and because claims 36-40 are ultimately dependent on claim 35 and because claims 42-46 are ultimately dependent on claim 41, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 35-46 are solicited.

### **CONCLUSION**

In view of the amendments and reasons provided above, it is believed that all pending claims are in condition for allowance. The amendments clarify the patentable invention without adding new subject matter. Applicant respectfully requests favorable reconsideration and early allowance of all pending claims.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Jeffrey R. Stone at 952 253-4130.

Respectfully submitted,

Altera Law Group, LLC  
Customer No. 22865

Date: 7/16/07

By: 

Jeffrey R. Stone  
Reg. No. 47,976  
JRS/mej